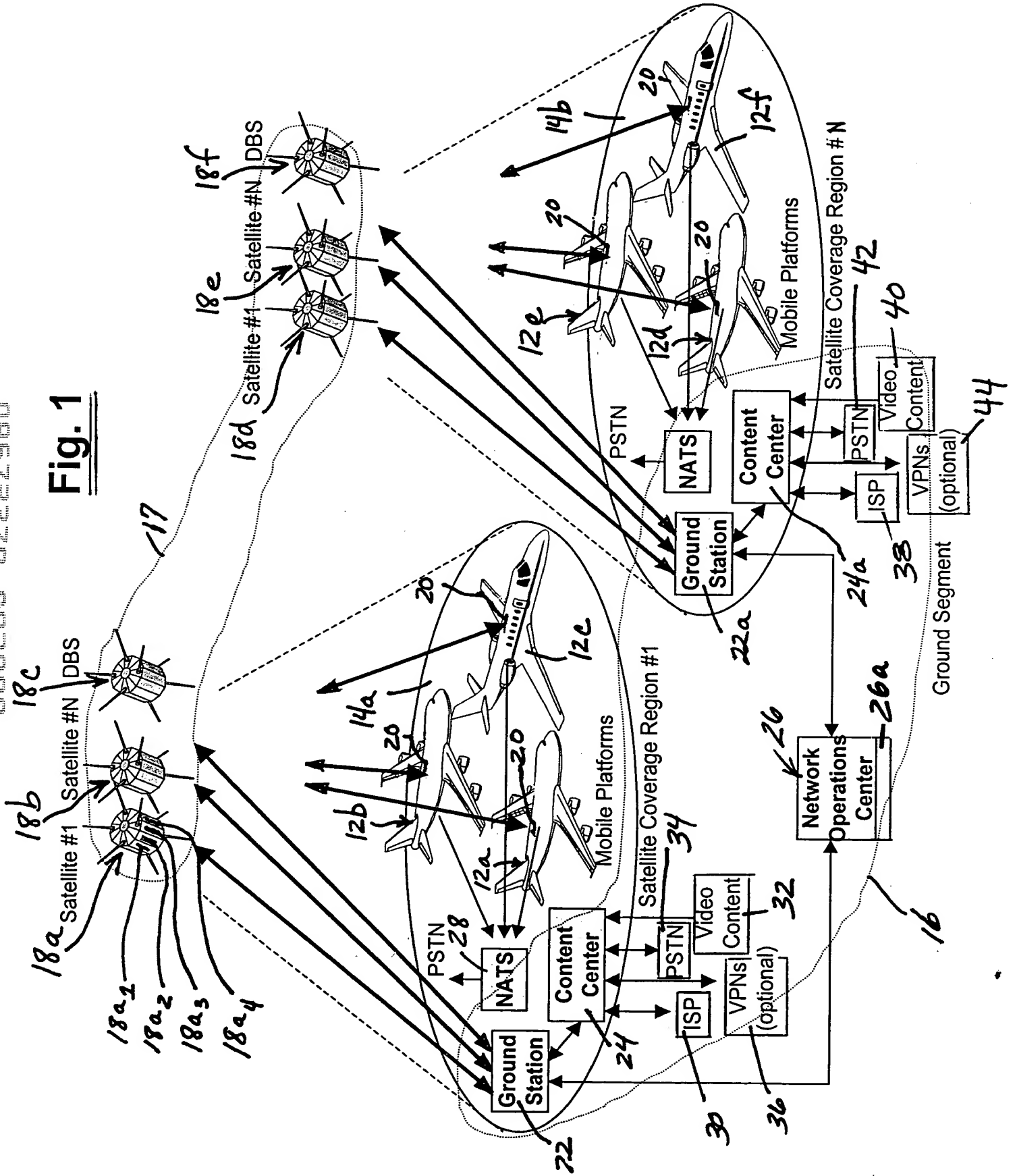


Fig. 1



To Satellites

The diagram illustrates a mobile system architecture, labeled 20. It is divided into several functional blocks:

- Transmit Path (74):** Includes a Transmit Antenna, a Transmitter(s) block, and a dashed box 70 containing an Encoder, Modulator, and Up-converter. Handwritten labels 68, 52, and 72 are associated with these components.
- Receive Path (82):** Includes a Receive Antenna, a Receiver(s) block, and a dashed box 76 containing a Decoder, Demodulator, and Down-converter. Handwritten labels 86 and 78 are associated with these components.
- System Controller (84):** A central control unit with bidirectional arrows connecting it to the Antenna Controller, the Transmitter(s), and the Receiver(s). It is also connected to "To all subsystems".
- Antenna Controller (86):** Manages the operation of the transmit and receive antennas.
- Router/Server (50):** A central processing unit that includes mass storage. It is connected to the transceiver blocks and a Control Unit & Display (54).
- Control Unit & Display (54):** The user interface component of the mobile system.
- Network Interfaces (58):** A group of optional interfaces connected to the Router/Server, including NATS Interface, CIS Interface, and IFE Interface.
- Local Area Network (56):** A network segment connecting the Router/Server to multiple User Computers/PDAs (labeled #1, ..., #N).
- Mobile System (60):** The overall system, which is noted as being "one per platform".

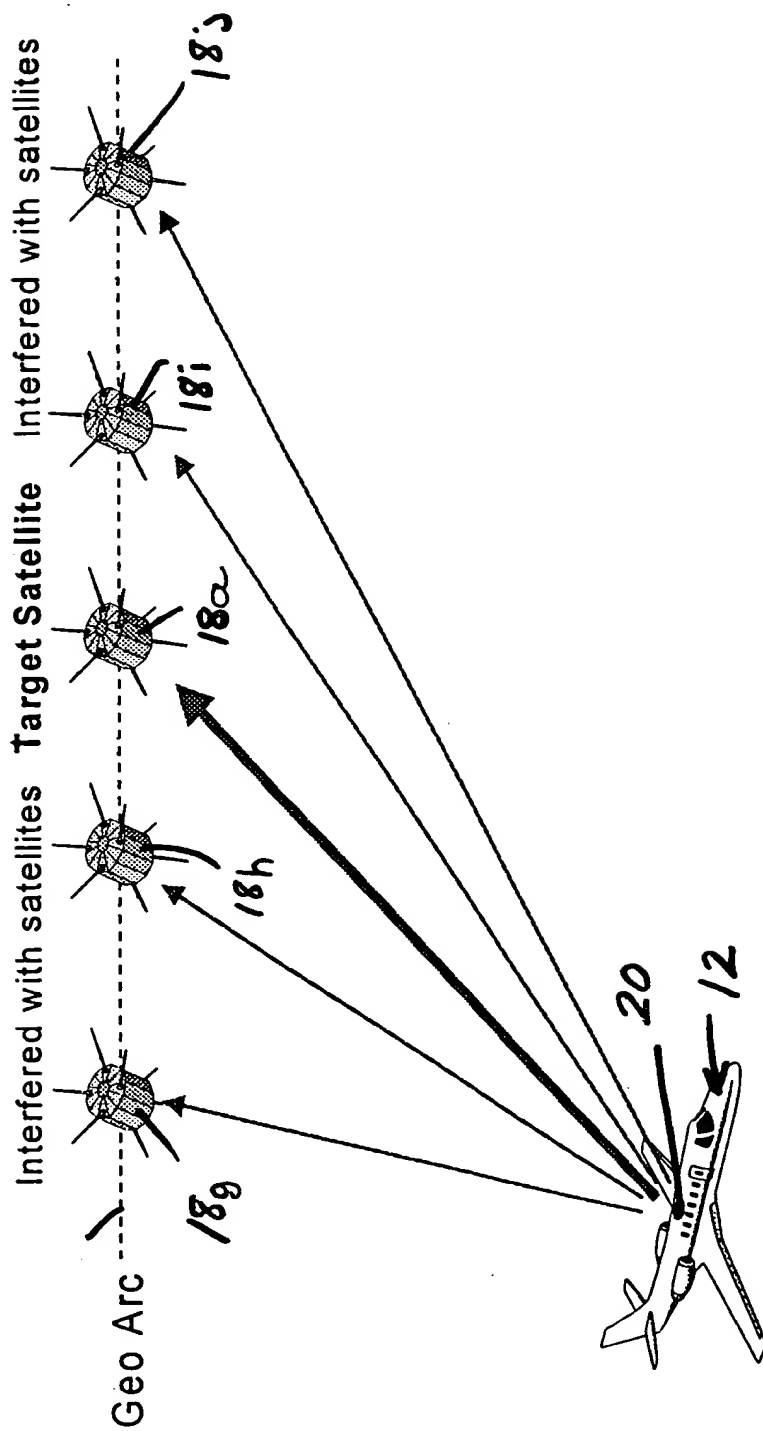


FIGURE 3

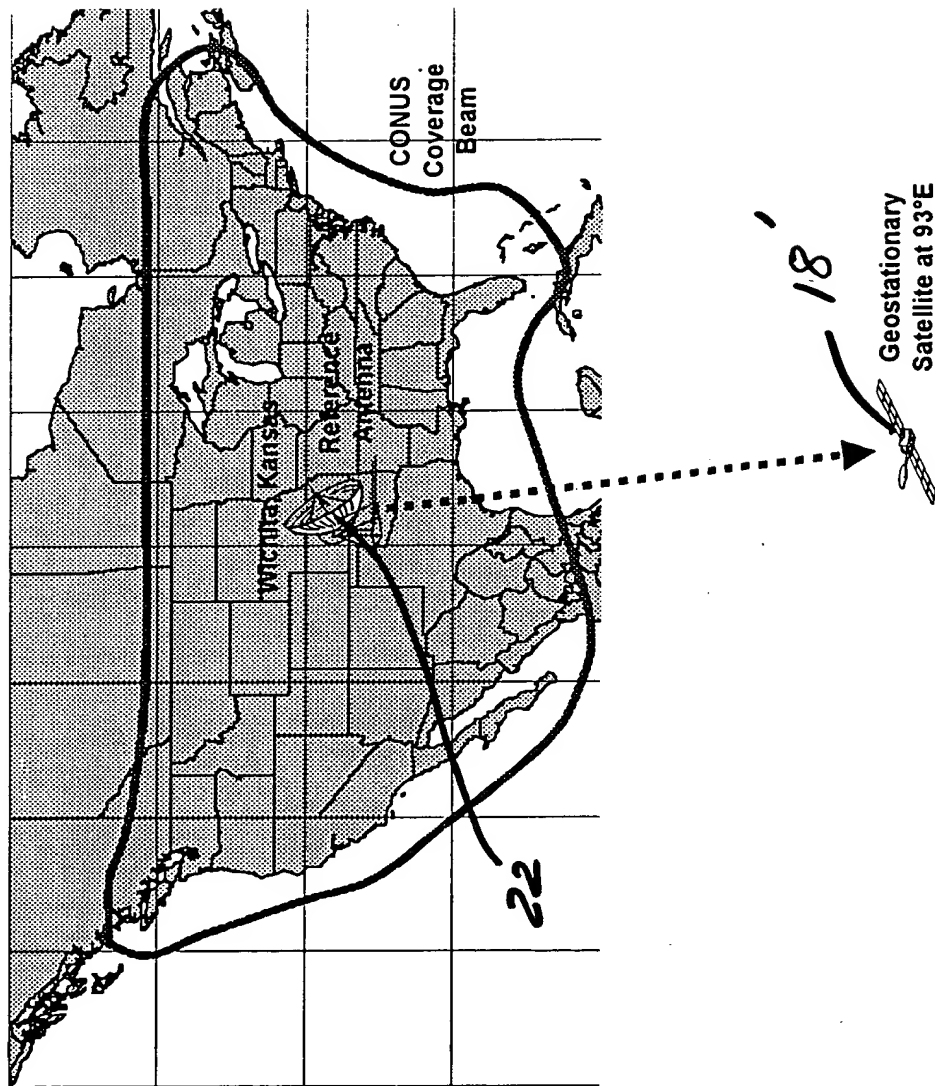


FIGURE 4

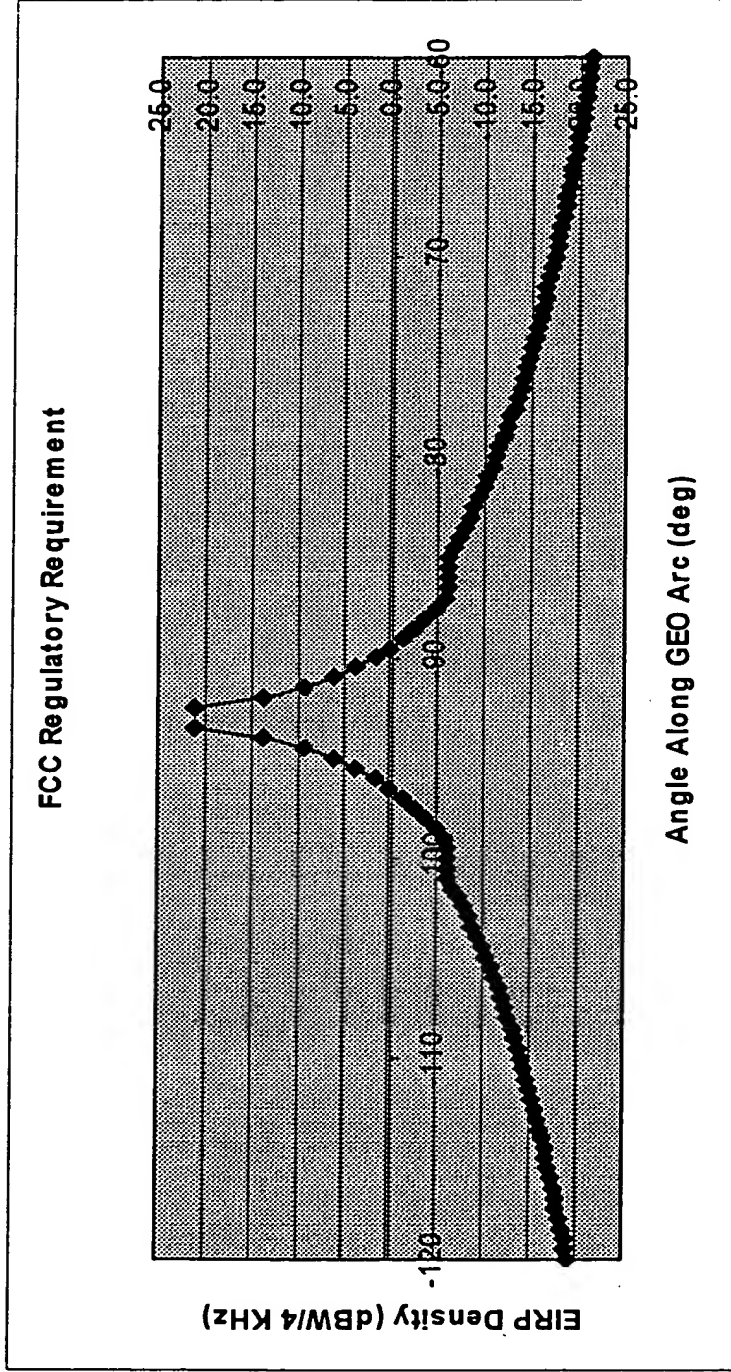


Figure 5

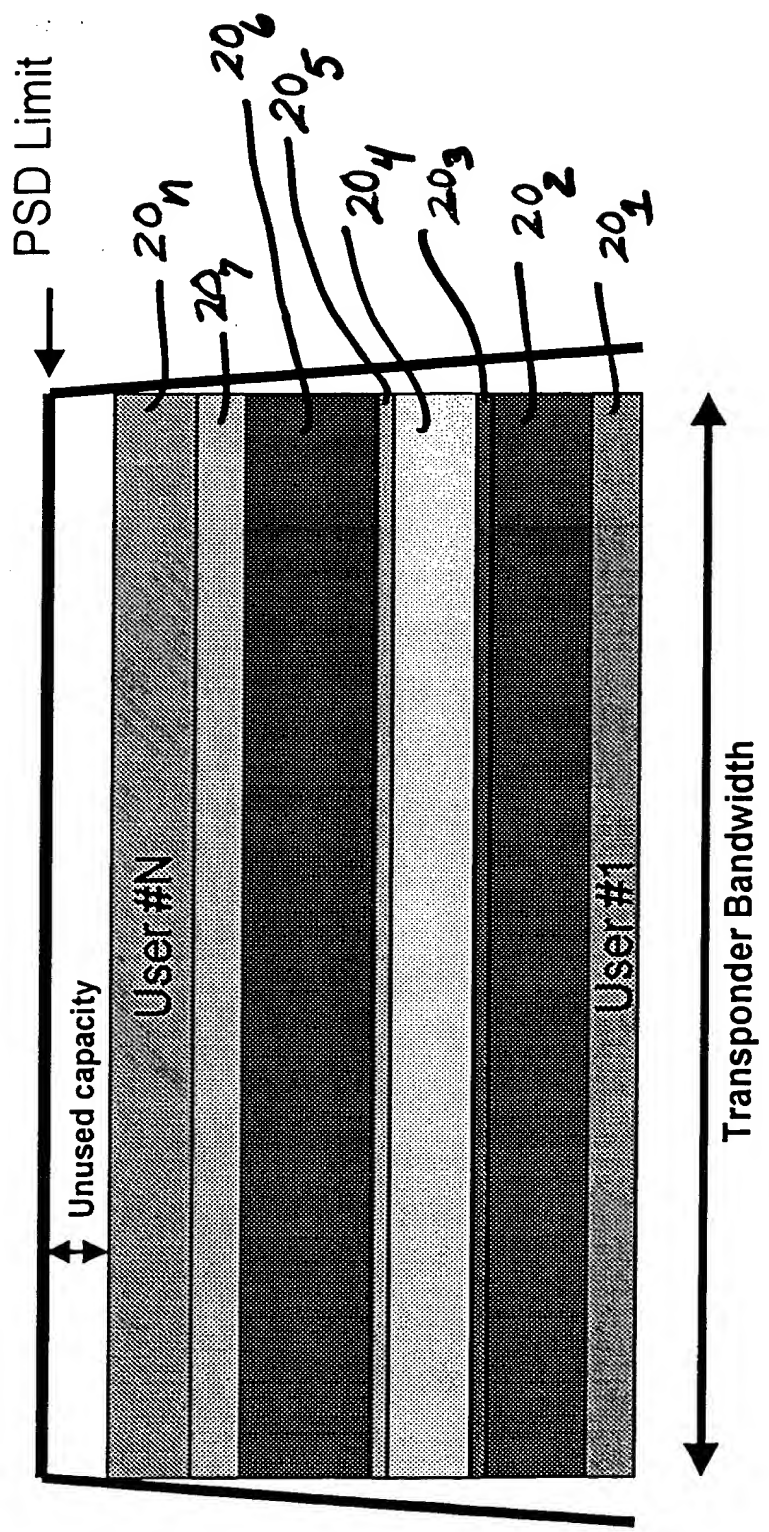


FIGURE 6

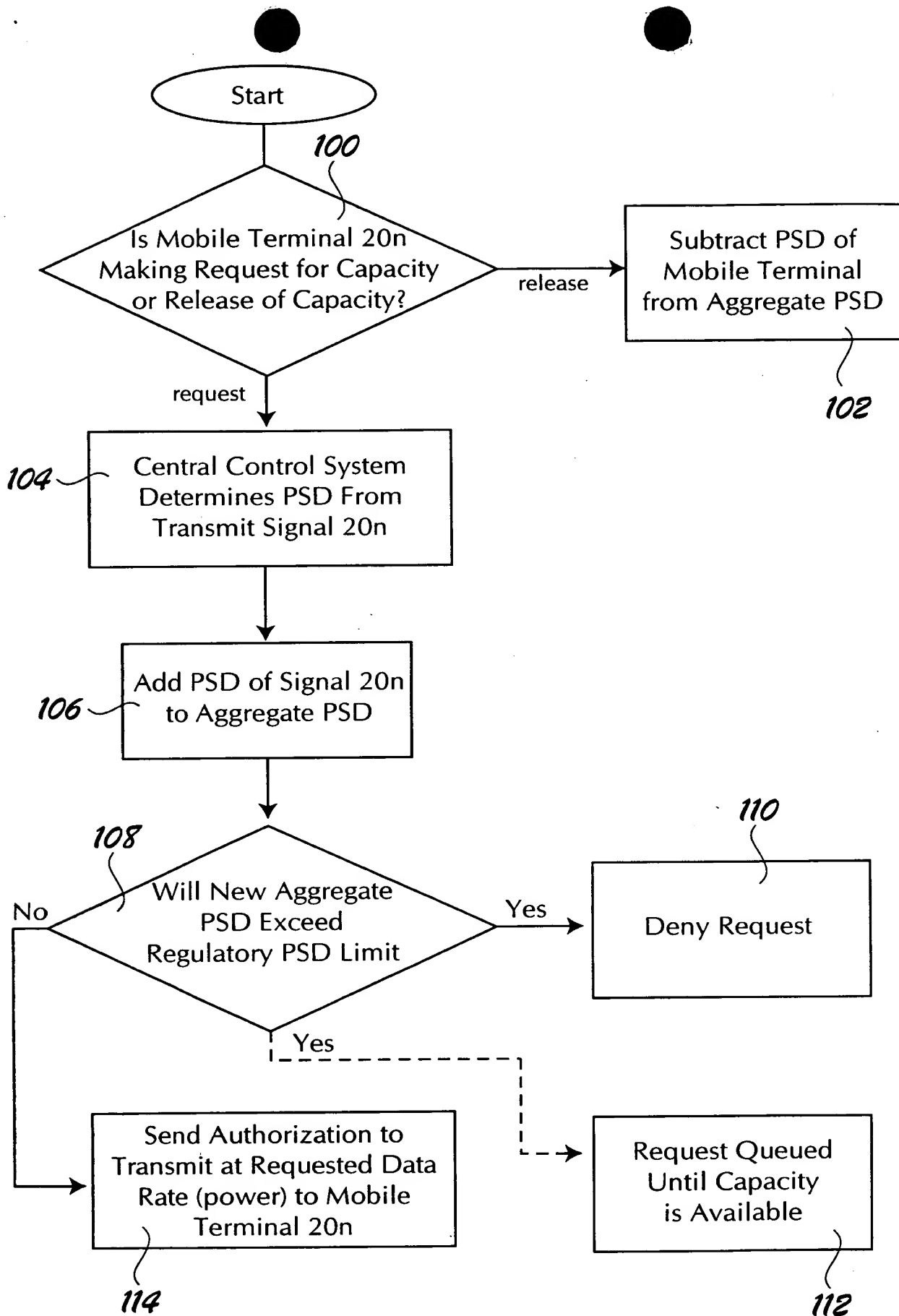


FIG. 7

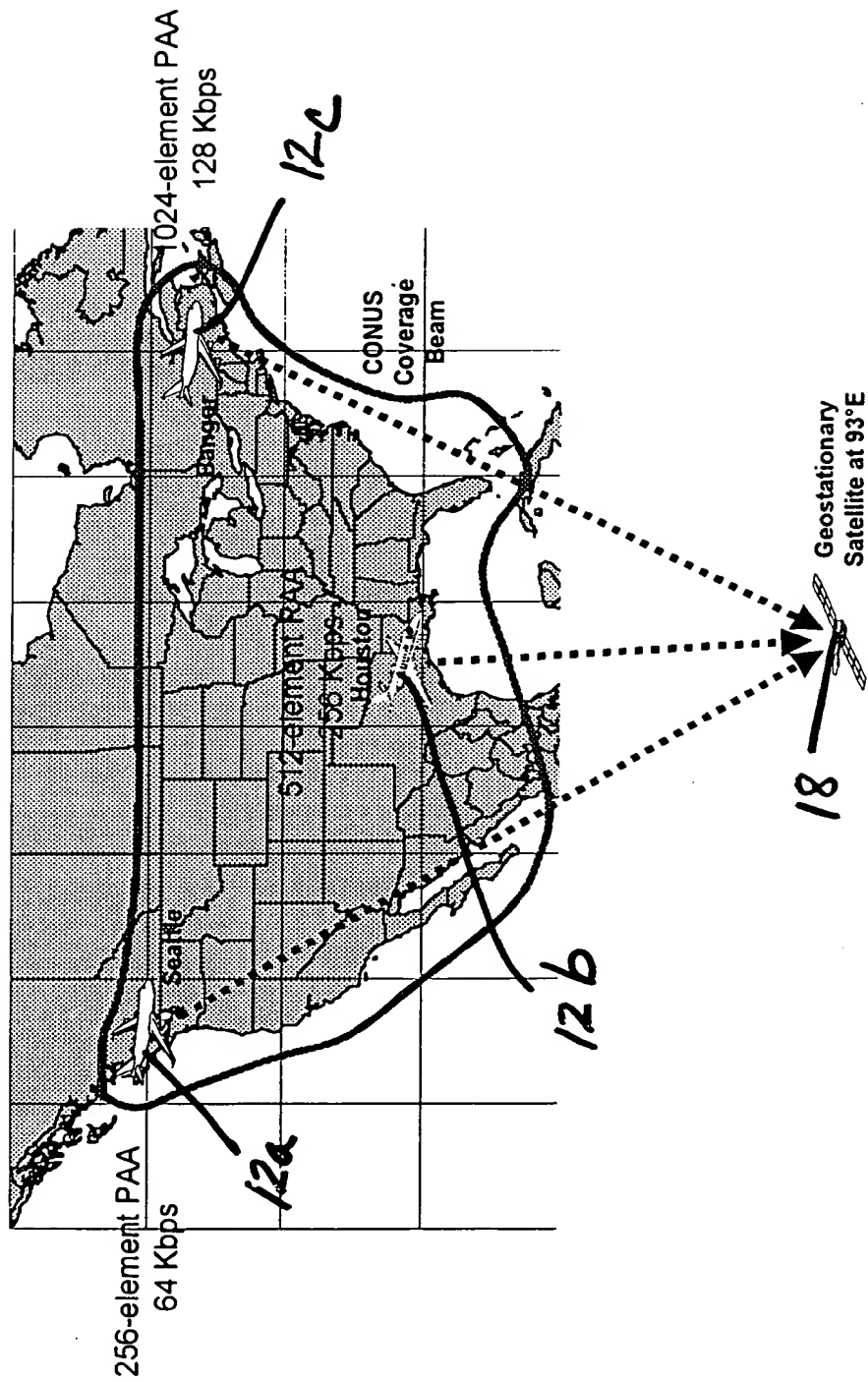


FIGURE 8

256 element
Phased Array Antenna,
34 dBW, 64 Kbps, Seattle

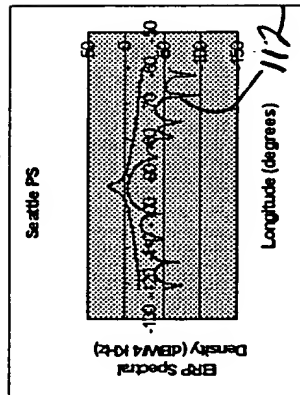


FIGURE 9

512 element
Phased Array Antenna,
39 dBW, 256 Kbps, Houston

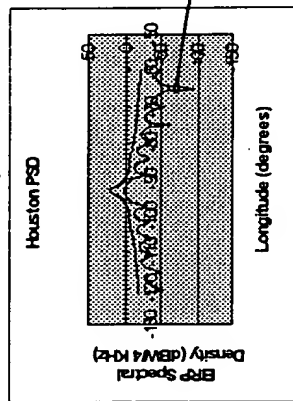


FIGURE 10

1024 element
Phased Array Antenna,
37 dBW, 128 Kbps, Bangor

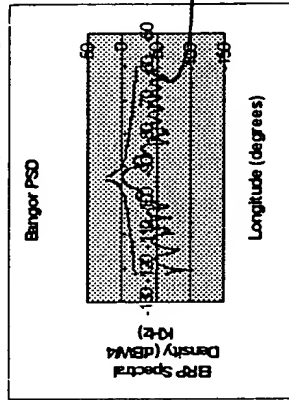


FIGURE 11

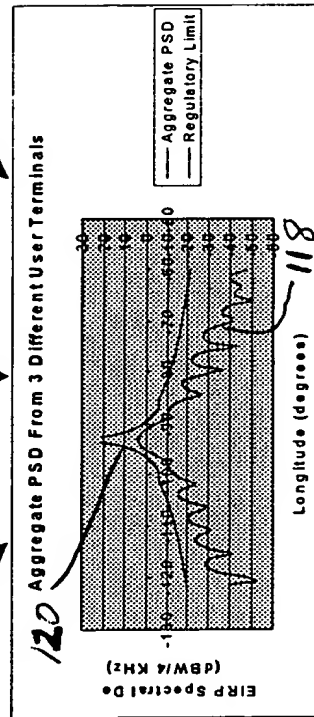


FIGURE 12